DOCUMENT RESUME

ED 304 622 CG 021 496

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TITLE Emotional Weeping, Age, and Physical Disorder.
PUB DATE Aug 88
NOTE 16p.; Paper presented at the Annual Meeting of the American Psychological Association (96th, Atlanta, GA, August 12-16, 1988).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adults; *Age Differences; *Aging (Individuals); Coping; *Diseases; *Emotional Response; Sex Differences; Well Being
IDENTIFIERS *Crying

ABSTRACT

Traditional ideas suggest that emotional weeping is healthy, but empirical support for this position is lacking. This study examined the relationship between crying frequency and reported physical disorders, and changes in crying frequency with age. Subjects were 225 men and 285 women ranging in age from 18-81. Subjects participated in telephone interviews and responded to questions about physical disorders, crying frequency, use of humor to cope with stressful events, and use of crying to cope with upsetting events. Results indicated that weeping was associated with increased disorder in early adulthood. As age increased, however, frequent criers were healthier than those who reported no weeping. Crying frequency decreased from ages 18-81 (with the exception of a slight increase at middle age). Females reported greater crying frequencies than males at each level. These results integrate previous discrepant findings about weeping frequency, age, and physical disorder. That is, previous research with young adults has shown that high weepers reported greater psychological mood disturbance than low weepers. Weeping is shown to be associated with decreased physical disorder. The behavioral and attitudinal issues surrounding weeping require further study. (Author/ABL)

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ED304622

EMOTIONAL WEEPING, AGE, AND PHYSICAL DISORDER[1]

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CG 021496

Presented at 96th Annual Convention of the American Psychological Association at Atlanta, GA, August, 1988, 8/13, 3-7pm.

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Abstract

Traditional ideas suggest that emotional weeping is healthy, but empirical support for this position is lacking. Adult subjects participated in a telephone interview to examine the relationships between age, crying frequency, and physical disorder. Results indicated that weeping was associated with increased disorder in early adulthood. As age increased, however, frequent criers were more healthy than those who reported no weeping. Crying frequency decreased from ages 18-81 (with the exception of a slight increase at middle age). These results integrate previously discrepant findings about weeping frequency, age, and physical disorder.

EMOTIONAL WEEPING, AGE, AND PHYSICAL DISORDER

The notion that emotional tears provide inoculation against somatic illness is widespread (e.g., Frey, 1985; Graham, 1972). Unsystematic observations of individuals with various types of physical illness (e.g., asthma, ulcers, cardiac problems) have suggested that the inhibition of emotion is maladaptive (Alexander, 1950; Montagu, 1957), and, in the popular literature, a "good cry" is often portrayed as healthy (Goldman, 1987). However, the empirical evidence has provided only limited support for these ideas (Crepeau, 1980; Kraemer & Hastrup, 1988; Labott & Martin, 1987; Schlosser, 1986). Therefore, the relationship between emotional weeping and physical disorder is still unclear.

Females report more weeping episodes than males (e.g., Frey, Hoffman-Ahern, Johnson, Lykken, & Tuason, 1983; Lombardo, Cretser, Lombardo, & Mathis, 1983; Williams, 1982). Research on the relationship between age and frequency has yielded the following conflicting results: no relationship between age and weeping frequency (Frey et al., 1983); more frequent weeping in younger subjects (Sanai Zaker, 1979); or more frequent weeping in older adults (Hastrup, Baker, Kraemer, & Bornstein, 1986).

The major purposes of the present study were to evaluate 1) the relationship between crying frequency and reported physical disorder, and 2) changes in crying frequency with age.

Method

Subjects. Participants (N=510; 225 men, 285 women; Ns below vary because of missing data) were adults living in a mid-sized midwestern city. All were contacted by telephone and agreed to respond to the

interview questions. The mean age was 43 (range: 18-81).

Procedure. Sets of four digit numbers were generated by computer, and were paired with the local phone exchanges, resulting in 7-digit telephone numbers. (Commercial numbers were screened out.) Once the household was contacted, the respondent was chosen using selection tables developed by the Opinion Research Institute at the University of Toledo. Trained interviewers conducted the confidential survey.

Materials.

Physical Disorder. Subjects were read a list of 11 physical disorders, and were asked to indicate for each disorder if they had a problem of this type. The items consisted of the following: ulcers, high blood pressure, asthma, thyroid disease, skin disorders, colitis, severe headaches, arthritis, diabetes, heart problems, TMJ (jaw joint disorder). Affirmative responses were totaled, such that higher disorder scores indicated the presence of more disorder.

Crying frequency. Subjects were asked the number of times they cried for emotional reasons (e.g., when sad, angry, or happy) within the past month.

Humor-coping. The tendency of individuals to use humor to cope with stressful events was assessed utilizing a 7-item scale developed by Martin & Lefcourt (1973). Each item is rated on a 4-pt. scale (from strongly agree to strongly disagree) and higher scores reflect greater humor-coping.

Crycoping. The crycoping scale assessed the extent to which individuals utilize emotional weeping to deal with upsetting events (analogous to humor-coping above). This 12-item scale consisted of 11

items taken from Labott & Martin (1987) and one additional item. Each statement was rated on a 4-pt. scale; higher scores reflected a greater tendency to use weeping as a coping strategy.

Results

Sex differences. The mean scores on each of the major variables for males and females are reported in Table 1 (as well as t-test results). Here it can be seen that females reported crying more frequently than males. Females also reported significantly more physical disorder than did males, and more frequent use of both humor and crying to cope with events. Table 2 shows the intercorrelations among these measures. Here again can be seen the relationship between the weeping measures and gender, but it is also clear that disorder was significantly related to age, and the two crying measures were significantly related to each other.

Cryfrequency, age, and disorders. The relationship between age and disorder in individuals with varying crying frequencies was examined. Two groups were developed: the Nocry group consisted of all individuals in the sample who reported a crying frequency of 0 within the past month (N=240). Those individuals reporting crying greater than 4 times per month made up the Hicry group (N=56). Figure 1 shows the regression of Disorders on Age for the Nocry and Hicry groups. It can be seen that, in early adulthood, the Nocry subjects report fewer disorders than the Hicry subjects. As age increases, however, disorders in the Nocry group increase faster than in the Hicry group, so that at older ages, Hicriers report fewer physical disorders than Nocriers. (The correlations between age and disorder differed significantly in these two groups: Hicry: r=.11; Nocry: r=.35, z=2.08, p<.05.)

Gender, age, and cryfrequency. The age range (18-81) was divided into 4 age categories: 18-29 (N=139); 30-49 (N=198); 50-69 (N=111); and 70-89 (N=41). A 2 (gender) x 4 (age group) analysis of variance was performed, with crying frequency as the dependent variable. Results indicated significant main effects of gender ($F(1,479)=8.47$, $p<.01$) and age ($F(3,479)=2.60$, $p=.05$), but no interaction. Figure 2 shows the mean crying frequency plotted by sex for each age group. Females reported greater crying frequencies than males at each level. As age increased, crying frequency decreased in both genders in a similar manner (except for a slight increase in crying frequency at 30-49).

Crycoping. As noted above, the correlation between cryfrequency and crycoping was .36, suggesting that, while these variables are related, they do not measure the same dimension. In order to assess the role of crycoping in physical disorder, a 4(age) x 2(crycoping - scores split at the median) x 2(sex) ANOVA was performed. Results indicated a main effect of Age ($F(3,415)=25.29$, $p<.00$) and a Age x Crycoping interaction ($F(3,415)=3.28$, $p<.03$). This interaction is graphed in Figure 3 and shows that there is little difference between high and low scorers in the three lower age groups (18-29, 30-49, 50-69). However, in the oldest group (70-89), the high crycoping group reported a notably higher level of disorder than the low crycoping group. (Note: The crycoping scale is currently being further developed and validated. These early results must be interpreted cautiously.)

Humor-coping. A 2(age) x 2(humor-coping) x 2(sex) ANOVA was run with disorder as the dependent variable. Main effects of both sex ($F(1,278)=8.87$, $p=.00$) and of age ($F(1,278)=19.01$, $p=.00$) occurred,

but there were no significant interactions involving the humor-coping variable.

Income. A 2(age) x 2(sex) x 4(income level: over $40,000 per year, $25,000-$40,000, $15,000-$25,000, $0-$15,000) ANOVA was also run with disorder as the dependent variable to ascertain income effects. A main effect of age ($F(3,441)=31.93$, $p<.00$) and an interaction of age x income ($F(9,441)=3.65$, $p<.02$) were obtained. Figure 4 shows the interaction and can be interpreted in the following manner: At the middle ages (30-49 and 50-69), those with the lowest income ($0-$15,000) reported the most disorder, but were similar to the higher income groups in the 18-29 and 70-89 age ranges. (The higher level of disorder in the highest income group at 70-89 is most likely a reflection of a small sample size.)

Discussion

The gender differences in crying frequency are entirely consistent with earlier findings about more frequent weeping in women (e.g., Lombardo et al., 1983; Ross & Mirowsky, 1984; Williams, 1982). The decrease in crying frequency with age is consistent with earlier research by Sanai Zaker (1979).

The present results also serve to integrate earlier discrepant findings. That is, previous research with young adults has shown that high weepers reported greater psychological mood disturbance than low weepers (at high levels of stressful events; Labott & Martin, 1987). The left portions of Figures 1 and 3 are consistent with this finding.

In addition, popular ideas about the utility of emotional expression, especially weeping (Goldberg, 1987), as well as recent theories about the health benefits of weeping (Frey, 1985) are reflected in the right side of Figure 1. Here it is clear that

weeping is associated with decreased physical disorder. However, it should be noted that the Hicry group represents a relatively small portion (11%) of the entire sample. In other words, most individuals (47%) report being Nocriers -- those individuals at greater risk for disorder as age increases.

When comparing Figures 1 and 3, it appears that cryfrequency and crycoping play different roles across various ages. In fact, the pattern is quite similar for the three lowest age groups; it is only in the 70-89 category that cryfrequency and crycoping produced notably different results. One might, however, expect somewhat divergent results from these two variables. Cryfrequency measured the number of times the individual cried within the past month -- a report of <u>actual behavior</u>. Crycoping, however, assessed actual crying behavior only indirectly. For example, if an individual "strongly agrees" with the item, "I feel better after a good cry," it is not clear that the individual cries and feels better often, although one might assume so. (The same argument could be made about the humor-coping scale.)

The result of actual weeping (assessed by the cryfrequency measure) may be a release of excessive emotionality (Koestler, 1964), a release of toxic chemicals (Frey, 1985), social support from the environment (Cornelius, 1981), or rejuvenation/moratorium effects (Labott & Martin, 1988). Assuming that any of these outcomes are positive, findings such as those in Figure 1 would be expected. The area of attitudes is more complicated as they are one step removed from actual behavior. In Figure 3, crycoping was associated with increased disorder in all but the 50-69 age group. It is of interest that the two variables would differ most notably in the oldest age

group, possibly because with increased age longer-term effects of actual crying behavior are more significant. In contrast to the crycoping findings reported here, Crepeau (1980) found a positive relationship between positive attitudes toward weeping and health. The behavioral and attitudinal issues surrounding weeping require further study.

Footnotes

[1] Data collection was supported in part by a grant from the University of Toledo Graduate School. We thank the Opinion Research Institute at the University of Toledo for conducting the interviews.

Table 1. Gender Differences

	Males	Females	t	p
Cryfrequency	1.12	2.64	-4.20	.00
Humor-coping	20.20	20.96	-2.32	.02
Age	42.79	43.27	-.30	NS
Disorder	1.20	1.50	-2.42	.02
Crycoping	25.12	30.98	-9.13	.00

Table 2. Correlations

	Sex	Age	Cryfrequency	Humor-coping	Disorder
Age	.01				
Cryfrequency	.19	-.08			
Humor-coping	.11	.09	-.09		
Disorder	.11	.39*	-.03	.02	
Crycoping	.40*	-.10	.36*	.05	.06

* $p < .001$

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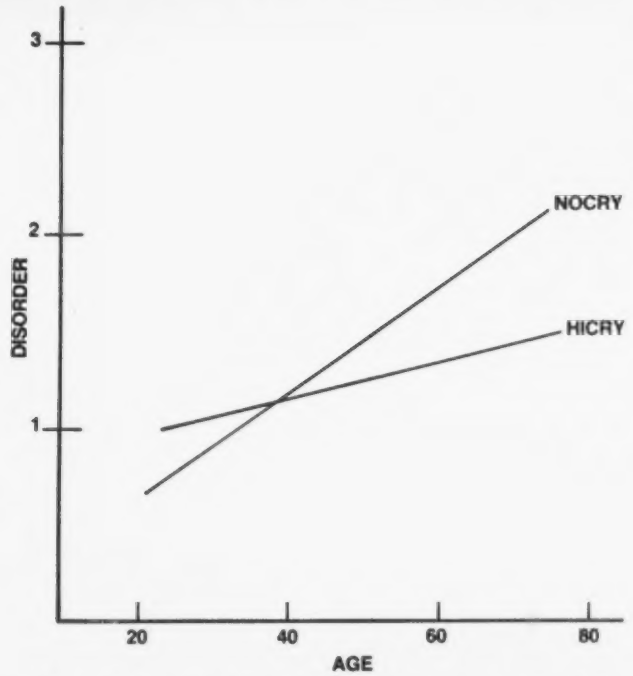


Figure 1. Regression of disorder on age for Nocry and Hicry groups.

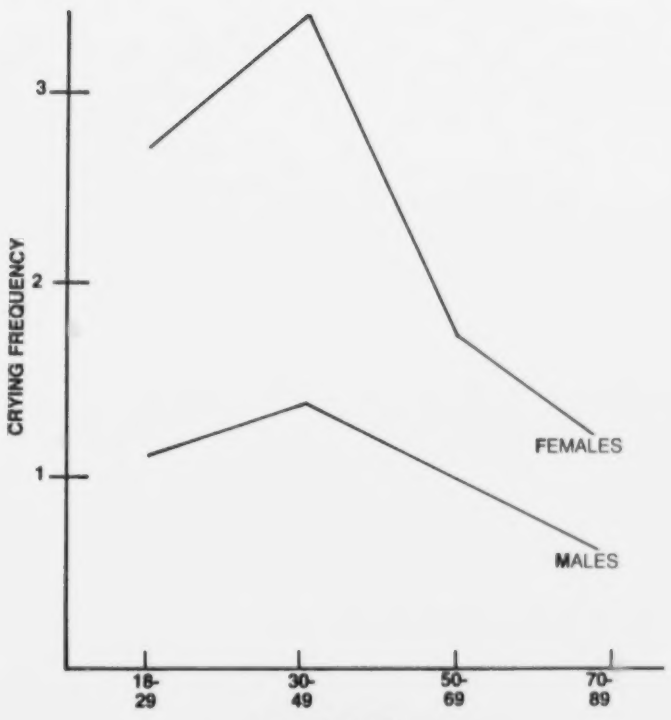


Figure 2. Crying frequency & gender for each age group.

FIG 3

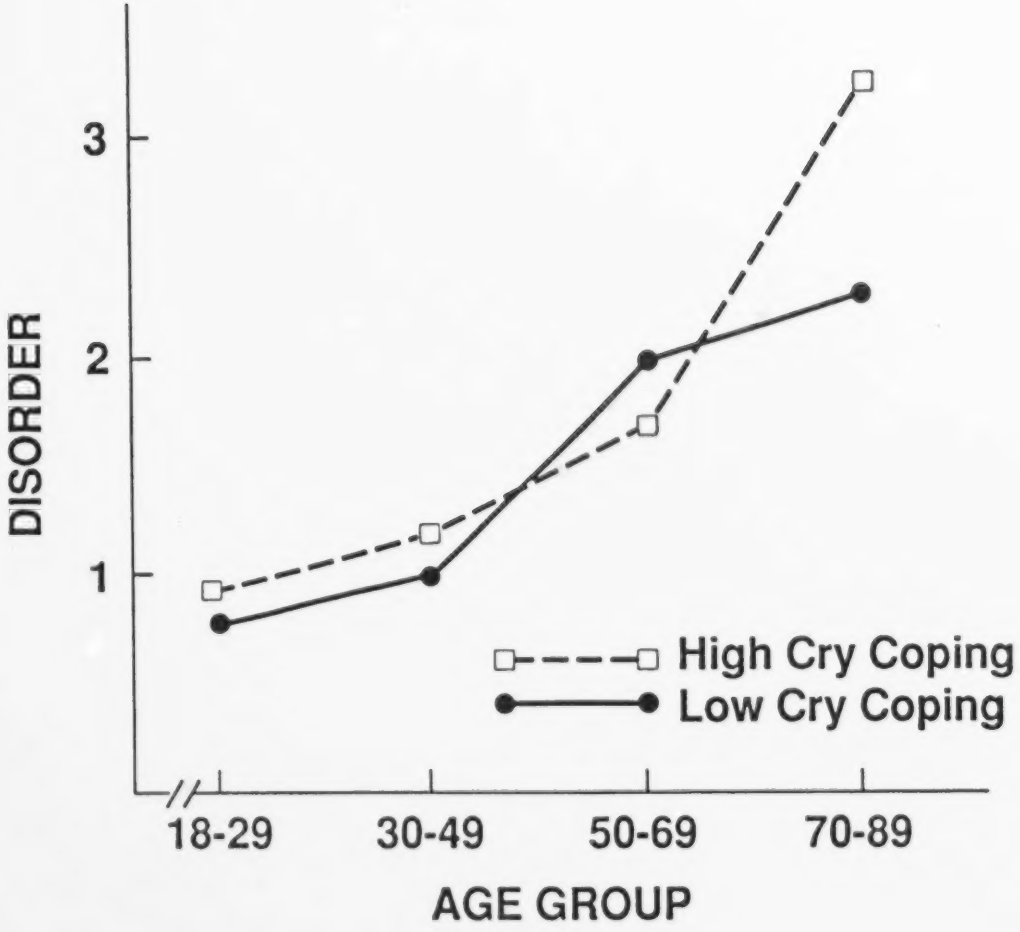
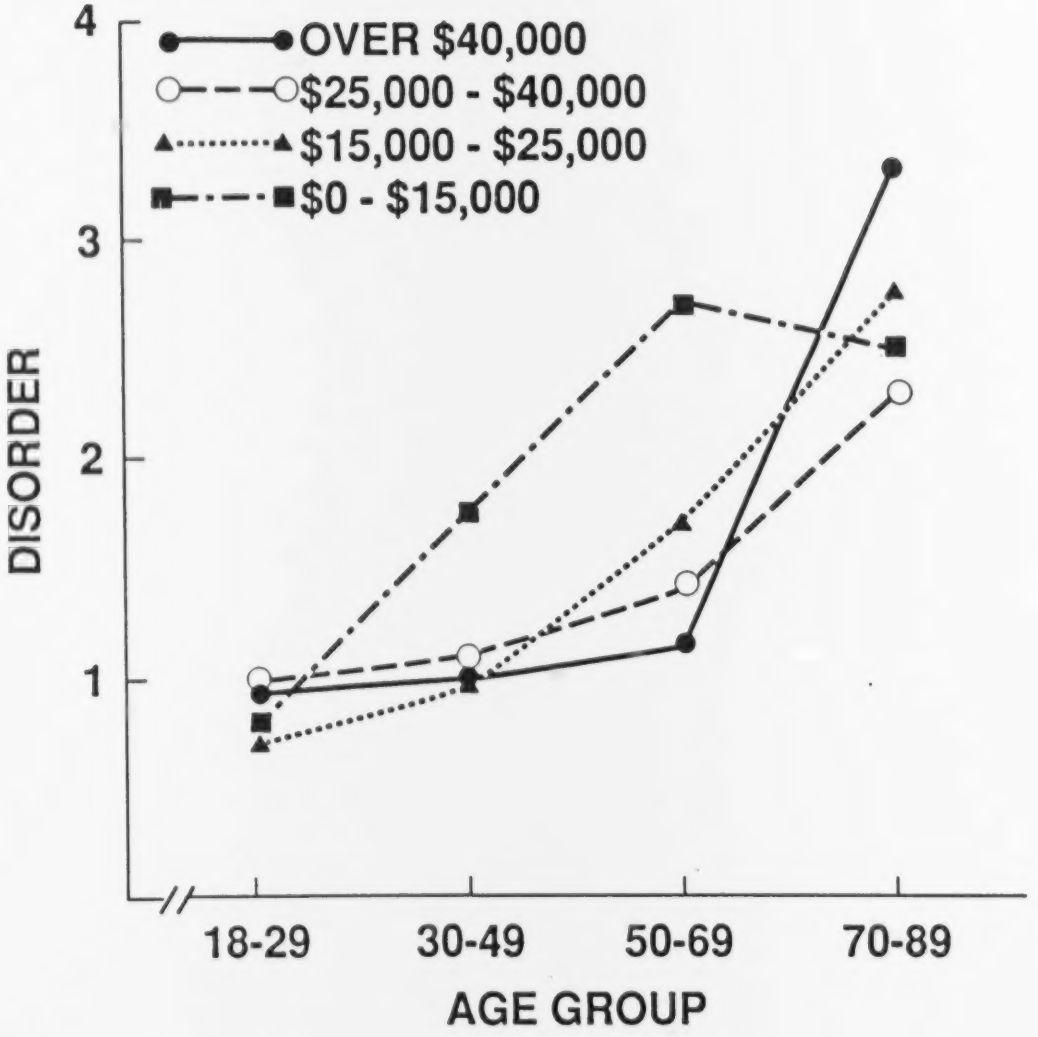

DISORDER
3
2
1
High Cry Coping
Low Cry Coping
18-29
30-49
50-69
70-89
AGE GROUP

FIG4


OVER $40,000
$25,000 - $40,000
$15,000 - $25,000
$0 - $15,000
DISORDER
4
3
2
1
18-29
30-49
50-69
70-89
AGE GROUP